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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,095	03/15/2004	Jong-Deog Kim	51876P592	4034
8791	7590	06/06/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			CONNOLLY, PATRICK J	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,095

Applicant(s)

KIM ET AL.

Examiner

Patrick J. Connolly

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-3 and 5-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "target wavelength channel" and "channel wavelength" in lines 4 and 5. There is insufficient antecedent basis for this limitation in the claim.

Claims 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the relationship between the optical output monitoring and the laser beam, such that "shielding" occurs. With further regard to claims 10 and 11, it is unclear what is meant by "predetermined ratio with respect to a total laser beam", specifically as to of what the predetermined ratio compares.

The following rejection is based on the claims as best interpreted by the Examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

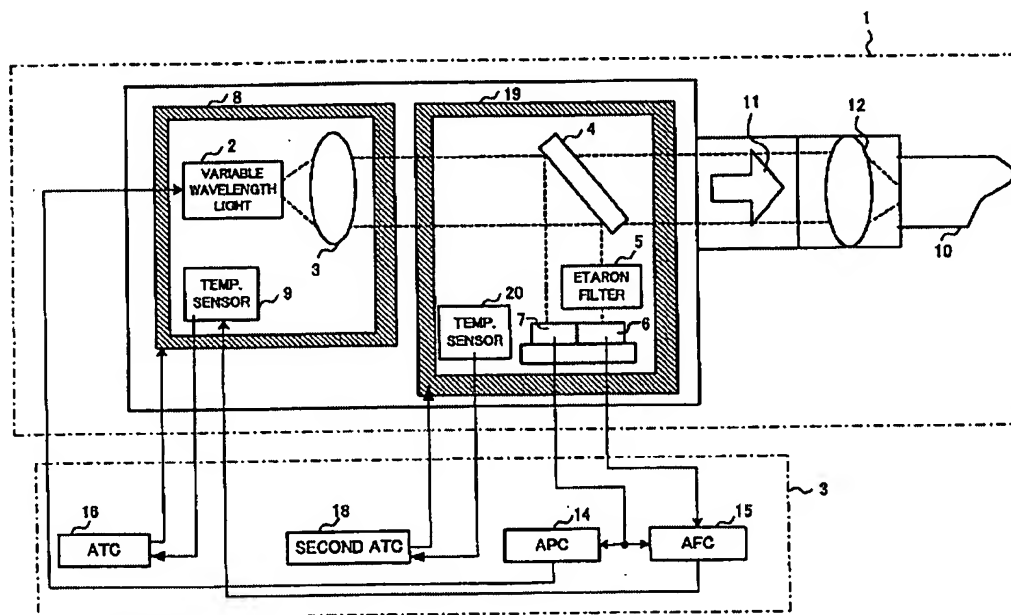
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 8 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S.

Patent Application Publication 2002/0071458 to Iwafuji.

As to claim 1, Iwafuji discloses a variable wavelength light source and monitoring system including (see Figure 9 below):

FIG.9



a laser source control means (14) for controlling a laser source (2), wherein the light beam travels along an optical axis (11);

an optical output monitoring unit (7);
a filtering unit (5);
an optical wavelength monitoring unit (6)
a thermo-electric cooler for maintaining the temperature of the laser (16, 8);
a temperature control means for setting the etalon to a predetermined temperature (18, 19);
a comparison means for comparing the output and wavelength signals (14,15); and
a processing means for comparing signal values to present values (see Figure 11, pages 4 and 5).

As to claim 2, Iwafuji discloses monitoring the temperature of the filtering unit separately (see Figure 9, also page 5)

As to claim 8, Iwafuji discloses comparing the ratio of the output signal and wavelength signal with the input current or temperature of the laser in order to stabilize the laser (see Figure 11 and Pages 4 and 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5-7 and 9-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwafuji.

As to claims 3, 6, 7, 9-16, 18 and 19 Iwafuji teaches collimation means (3), separate mounting means (see Figure 9 above), a heating unit for the etalon filter (18), separate sensing temperature sensing units for the filter and laser (9 and 20).

Iwafuji does not teach alignment of the components or alignment units explicitly.

First, it is well known in the art that optical components must be aligned in order to obtain efficient transmission and detection results. Further, it is well known that maintaining thermal stability in components helps maintain spatial, optical alignment (see for example U.S. Patent No. 6,724,797 to Daiber). Iwafuji teaches maintaining thermal stability in the components of the laser and filtering units, which thereby maintains optical alignment and peak optical component performance.

Further, Iwafuji teaches electronic cooling elements 8 and 19, which are substrates that conduct electrical signals and therefore including “metal patterns” for processing electrical signals.

It would have been obvious to one of ordinary skill in the art at the time of invention to use the thermal stability components in combination with the optical components in order to achieve alignment and therefore achieve the most efficient optical setup.

As to claim 5, Iwafuji teaches monitoring beam characteristics off-axis.

It is well known that characteristics of laser beam, such as wavelength and intensity can also be monitored on axis or parallel to the optical axis (see for example aforementioned Daiber or U.S. Patent No. 6,650,667 to Nasu et al).

It would have been obvious to one of ordinary skill in the art at the time of invention that the apparatus of Iwafuji could be reconfigured to make takes measurements along the optical axis of the laser so as to ease alignment issues.

As to claim 17, Iwafuji teaches selecting spectral ranges in relation to temperature changes (see Page 4).

As to claim 20, Iwafuji teaches using the collimated beam for optical output and wavelength monitoring.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Connolly whose telephone number is 571.272.2412.

The examiner can normally be reached on 9:00 am - 7:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on 571.272.2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

pjc PTL
05.11.2005


ZANDRA V. SMITH
PRIMARY EXAMINER